TITLE: SCREENING METHOD FOR GENES OF

BREWING YEAST

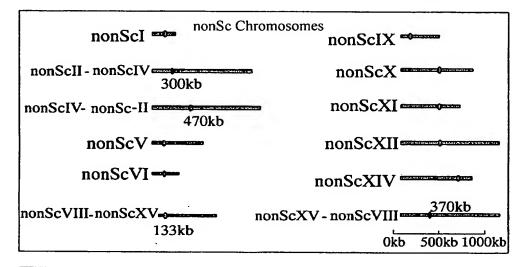
INVENTOR(S): YOSHIHIRO NAKAO ET AL.

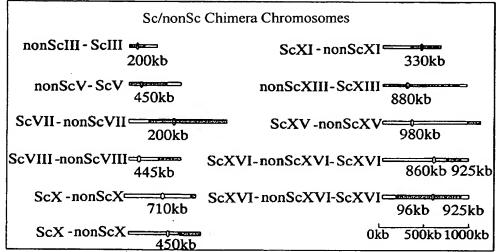
ATTORNEY DKT. No.: 034100-002

SHEET 1 of 12

Fig. 1

ScI 🗫	Sc Chromosomes	ScIX →
ScII	1	ScXI ——
ScIII ←		
ScIV ———		ScXII —
ScV		ScXIII ———
ScVI 🗫		ScXIV ———
ScVIII ⊸		ScXV
		0kb 500kb 1000kb





TITLE: SCREENING METHOD FOR GENES OF

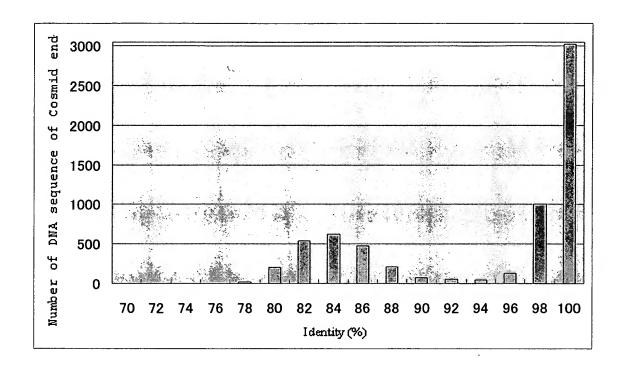
BREWING YEAST

INVENTOR(S): YOSHIHIRO NAKAO ET AL.

ATTORNEY DKT. No.: 034100-002

SHEET 2 of 12

Fig. 2

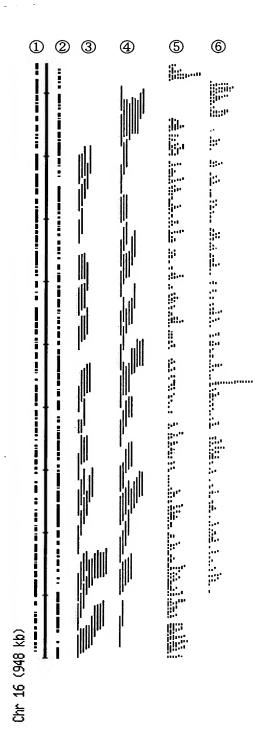


BREWING YEAST

INVENTOR(S): YOSHIHIRO NAKAO ET AL. ATTORNEY DKT. NO.: 034100-002

SHEET 3 of 12

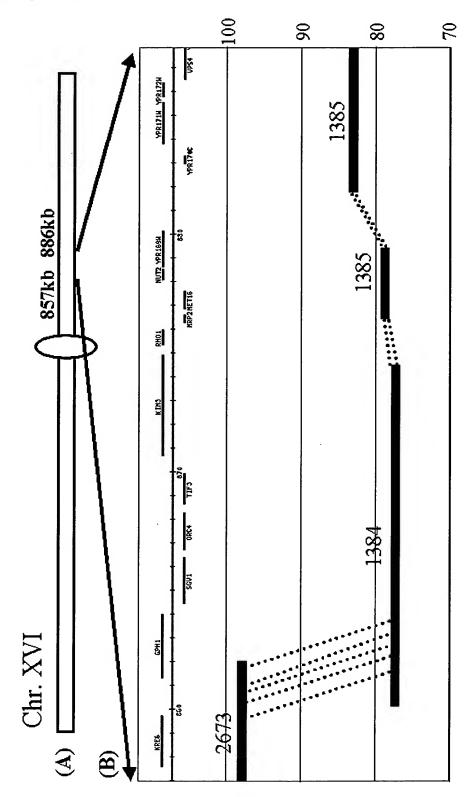
Fig. 3



INVENTOR(S): YOSHIHIRO NAKAO ET AL. ATTORNEY DKT. NO.: 034100-002

SHEET 4 of 12

Fig. 4



TITLE: SCREENING METHOD FOR GENES OF

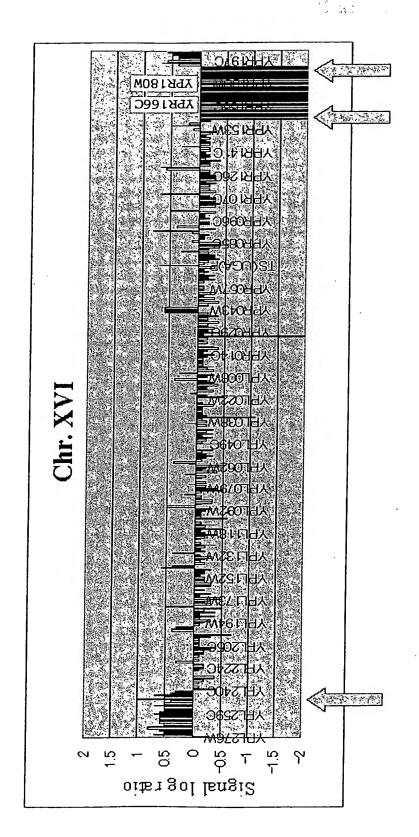
BREWING YEAST

INVENTOR(S): YOSHIHIRO NAKAO ET AL.

ATTORNEY DKT. No.: 034100-002

SHEET 5 of 12

Fig. 5

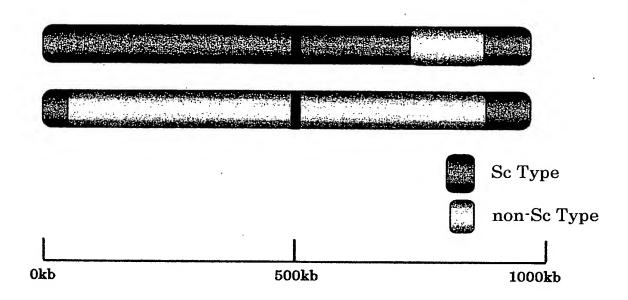


BREWING YEAST

INVENTOR(S): YOSHIHIRO NAKAO ET AL. ATTORNEY DKT. NO.: 034100-002

SHEET 6 of 12

Fig. 6



TITLE: SCREENING METHOD FOR GENES OF

BREWING YEAST

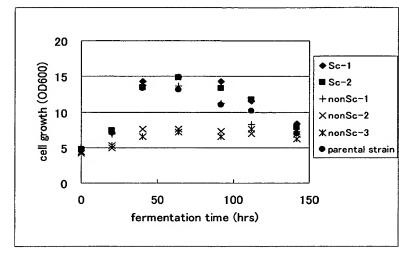
INVENTOR(S): YOSHIHIRO NAKAO ET AL.

ATTORNEY DKT. No.: 034100-002

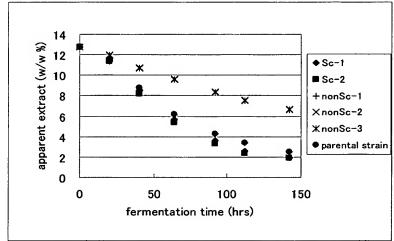
SHEET 7 of 12

Fig. 7

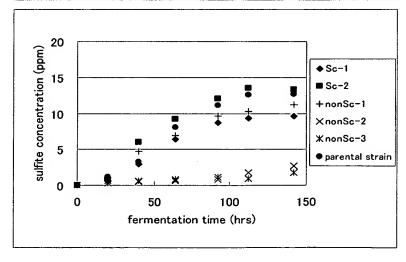




(b)



(c)



BREWING YEAST

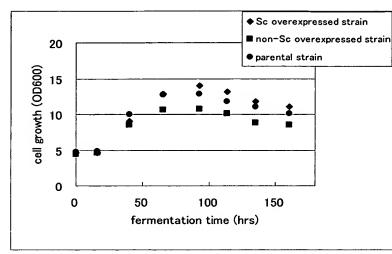
INVENTOR(S): YOSHIHIRO NAKAO ET AL.

ATTORNEY DKT. No.: 034100-002

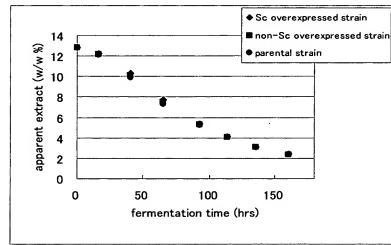
SHEET 8 of 12

Fig.

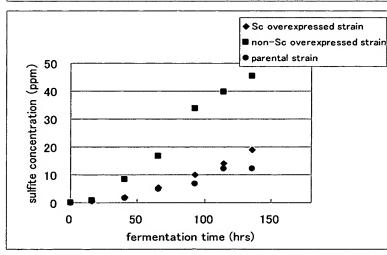
(a)



(b)



(c)



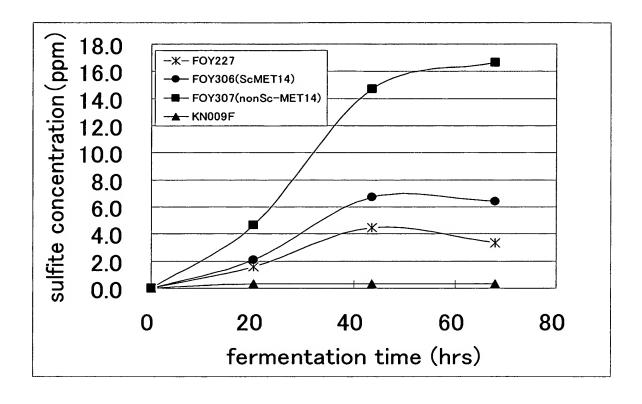
TITLE: SCREENING METHOD FOR GENES OF

BREWING YEAST

INVENTOR(S): YOSHIHIRO NAKAO ET AL.

ATTORNEY DKT. No.: 034100-002 SHEET 9 of 12

Fig. 9



BREWING YEAST

Inventor(s): Yoshihiro NAKAO et al. Attorney Dkt. No.: 034100-002

SHEET 10 of 12

Fig. 10

l alggligcca aligggiaci igcictiacg aggcaglitig accecticat 51 gittatgaig gleatgggig icggeatite alegaatati ciatataget 101 icceatatee igeaaggigg ciaagaatat gelectacat catgitiget 151 aleactigee itatilicat igeiggeag geactacaaa taitacatit 201 galigictat aliaaggaga aaagetteag agaatatiti aalgacitit 251 icagaaatat gaageacagt itatitiggg gtactialee catggggita 301 gitacaatia laaatiliett aggageacte icgaaagega acaegaegaa 351 gageeceact aaticeagaa alitigatgat attigitiac gietigggi 401 gglatgatet egeagicigt elagtaatag egiggggaat elegitiete 451 ateiggeatg actatlacie litiggaaggg aligggaate aleeticata 501 taatateaaa alggeateeg aaaacatgaa aagigtatig elactigat 551 icaticegei ggtiglegle geticaagit giggaacati eacaalgiea 661 gaaatatiet teealgegit taatagaaat atteaactga taacgliggi 651 catatigege taacgtgge igeatgeeat taietiegte iteatetga 701 tigegalata ettelggagi elitaataa ataagaalaee accaatgaca 751 caggititea eetitaleet getitiggge eegatggee aaggaagtiy 801 iggagietia tigeliacag alaatataaa aaaatatgee ggeaaatati 851 acceaacaga laacatiaca agaagaacag agatatigae taitgeege 951 latgggetat ititeaceg igattietge egiticaale elitegeege 1001 acaataaaaa agagatigaa aacgagaacag gaaaagfgaa gagagitiat 1051 accitecaca aaggtititig ggggatgaet tieeegatgg glaciatge 1101 titaggaaac gaagagtiat algigeagta taaccagiae gilecettat 1151 algealitaa geeelitaac ageatgeat taaccagiae gilecettat 1151 algealitaa geeelitaac aaccaataaca geeggigiite egitigtigg 1201 icaatictal geetitiate cacaatigaaa geeggaaaagaa 1301 egaacgtite teeglataac ageatigaaa aeggagaaaagaaagaaaagaaaagaaaagaaaa							
51 gittalgaig gleatgggig teggeatite ategaatati clatataget 101 teccatatee tgeaaggigg claagaatat getectacat catgitiget 151 ateactigee tlatitteat tgetgigeag geactacaaa taitacatit 201 gattgietat attaaggaga aaagetteag agaatatitt aatgaetitt 251 teagaaatat gaageacagt tiatitiggg gacetacaaa taitacatit 301 gitacaatta taaattiett aggageacte tegaaagega cacagaegaa 351 gageeecact aatteeagaa altigatgat attigitiae gietigiggi 401 ggtatgatet egeagietigt elagiaatag egigggatat elegitiete 451 atetggeatg actattace titiggaaggg attigggaate ateetitee 451 atetggeatg actattace titiggaaggg attigggaate ateetiteata 501 taatateaaa atggeateeg aaaacatgaa aagtgiattg etactggata 551 teatteeget ggttgiegte getteaagtt gtggaacaatt cacaatgica 601 gaaatattet teeatgegit taatagaaat atteaactga taacgitggi 651 catatggee ttaaegtgge tgeatgeeat tatettegt teetataetga 701 ttgegatata ettetggagt etitatatta ataagataee aceaatgaea 701 ttgegatata ettetggagt etitatatta ataagataee aceaatgaea 701 ttgegatata ettetggagt etittatatta ataagataee aceaatgaea 702 ttgegatata ettetgaggt etittatatta ataagataee aceaatgaea 703 ttgegateta tigettaeeg gettitegge eegatggee aaggaagtity 801 tggagietta tigettaeag ataatataaa aaaatatgee ggeaaatatt 851 aeeeaacaga taacattaea aggaagaacaag agaatattgae taitgeagti 901 eeatggigit teaaaattet aggeatggit telgetaege cattgetege 951 tatgggetat tittteaeeg tgattietgt egitteaate etiteege 951 tatgggetat tittteaeeg tgattietgt egitteaate etiteege 1001 acaataaaaa agagattgaa aacgagaag gaaaagtgaa gagagttat 1051 aeetteeaa aaggtitta ggggatgaet teeegaaggtetat 1101 ttaaggaaae gaagagtita atggeagta taaccagtae giteeettat 1102 teaatietat geettitatg eacattaeeg geggtgitig egittgitgg 1201 teaatietat geettitatg eacattgaa geggaaaga 1301 egaagtite teegtaaac		ScSSU1					
101 icccatatcc igcaaggigg claagaalat gcicciacat caigitigci 151 atcaciigcc itatiticat igcigigcag gcactacaaa taitacatti 201 gaitgiciat atlaaggaga aaagcticag agaatattit aatgactiti 251 icagaaalat gaagcacagt itatitiggg gtacttalcc caiggggita 301 gtiacaatta taaatticit aggagcacic icgaaagcga acacgacgaa 351 gagccccact aattccagaa aitigatgat attigitiac gictigiggi 401 ggiatgatci cgcagicigt clagtaatag cgiggggat cicgiticic 451 atcigcatg actatlacic itiggaaggg aligggaalc alccitcata 501 taatatcaaa alggcatccg aaaacatgaa aagigiatig claciggata 551 icaticcgci ggitgicgic gcitcaagit giggaacati cacaatgica 601 gaaatatici tccalgcgit iaatagaaat aticaaciga taacgiiggi 651 catatgigcc itaacgiggc igcaigccat taicticgic itcatactga 701 itgcgatata citciggagi cilitatatta ataagatacc accaatgaca 751 caggiitica ccitaticct gcittigggc ccgatgggcc aaggaagity 801 iggagicita itgcilacag alaatataaa aaaatatgcg ggcaaatatt 851 acccaacaga taacattaca agagaacaag agatatigac taitgcagti 901 ccatggigit icaaaatict aggcatggit icigciaigg caitgcigc 951 latgggciat ititicaccg igatticig cgiticaatc cigicgact 1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagtitat 1051 accitcaca aaggtititg ggggatgact itcccgatgg glaciatgic 1101 itaggaac gaagagttat algigcagta taaccagtac gitccctiat 1151 atgcalitag agicciagga accatatacg gcgggitig cgitigitgg 1201 icaaticiat gccititatg cacatigcat gagaaticta aaaagaaca 1301 cgacagtitc tccgtataac agcattgaaa gcgtggaaga alcaaactcg		1	atggttgcca	altgggtact	tgctcttacg	aggcagtttg	acccttcat
atcactigcc tlatiticat igcigigag gcaciacaaa taltacatit gaitgiciat altaagaga aaagcticag agaatatitt aatgactitt icagaaatat gaagcacagt tlatitiggg gtacttatcc catggggtta gitacaatia taaattictt aggagcacic tcgaaagcga acacgacgaa sil gagccccact aattccagaa altigatgat attigittac gictigiggt ggtatgatct cgcaglcigt clagtaatag cgtggggat cicgitictc 451 atctggcatg actattacic titggaaggg altgggaatc atccitcata 501 taatacaaa atggcatccg aaaacatgaa aagtgatitg ctactggata 551 icattccgci ggttgicgtc gcttcaagtt gtggaacatt cacaatgtca 601 gaaatatict tccalgcgit taatagaaat attcaactga taacgliggi 651 cattatggcc ttaacgiggc tgcatgccat tatcticgtc itcatactga 701 tigcgatata citctggagt citiatatta ataagatacc accaatgaca 751 caggititca ccitaticct gcttttgggc ccgatgggcc aaggaagtty 801 tiggagtctia tigcitacag ataatataaa aaaatatgcg ggcaaatatt 851 acccaacaga taacattaca agagaacaag agatattgac tattgcagtt 901 ccatggtgit tcaaaattct aggcatggti tclgctatgc cattgctcgc 951 tatgggctat tittcaccg tgattictgt cgittcaalc ctgtcgtact 1001 acaataaaaa aggaattgaa aacgagacag gaaaagtgaa gagagtitat 1051 accticcaca aaggtittig ggggatgact ticccgatgg gtactatgtc 1101 tttaggaaac gaagagttat atglgcagta taaccagtac gticccttat 1151 atgcaittag agtcctagga accatatacg gcggtgtitt gcgttigtigg 1201 ccatictat gcctittatg cacattgcat gagtaticta aaaagatgci 1251 gcatgctgcc cgtaaatctt cattatitic agagtcaggi acggaaaaga 1301 cgacagtitc tccgtataac agcattgaaa gcgtggaaga atcaaactcg		51	gtttatgatg	glcatgggtg	teggeattte	atcgaatatt	ctatatagct
201 gaitgiciai allaaggaga aaagcitcag agaataliti aalgaciiti 251 icagaaatai gaagcacagt tiattiggg gtacttaicc catggggtta 301 gtiacaatia taaatiicit aggagcacic tegaaagega acacgacgaa 351 gagceccaci aaticcagaa alitgatgat attigittac gtetigiggi 401 ggtatgatel egeagletgt elagtaatag egiggggtat electicata 451 ateiggeatg actatlacie litggaaggg aligggaate aleeticata 501 taatacaaa alggeateeg aaaacatgaa aaglgtaitg etaciggata 551 icaticegei ggtiglegte getteaagti giggaacati eacaalgtea 601 gaaataliei teealgegti taatagaaat aticaactga taacgliggi 651 catatgigee itaaegigge tgeatgeeat talettegte iteatactga 701 tigegatata eleetgaggi elitatalia ataagatace aceaatgaca 751 caggititea eetitelggagi elitatalia ataagatace aceaatgaca 751 caggititea eetitaleed gettitggge eegatgggee aaggaagtiy 801 tiggagtetta tigetiacag ataatataaa aaaatatgee ggeaaatatt 851 aceeaacaga laacattaca aggagaacaag agatattgae tattgeagti 901 eeatggtgit teaaaattee aggeatggit telgetatge eattgetege 951 latgggetat tititeaceg tattletgi egitteaale etitegee 1001 acaataaaaa aggaattgaa aacgagaacag gaaaagtgaa gagagtitat 1051 acetteeaa aaggittitg ggggatgaet tieeegatge gtactatgte 1101 titaggaaac gaaggitat atglgeagta taaccagtae gtieeettat 1151 algeaittag agteetagga aceatataeg geggittite egittigtigg 1201 leaatictal geetitiatig eacattgaaa gegitgaaga ateaaacteg		101	tcccatatcc	tgcaaggtgg	ctaagaatat	gctcctacat	catgtttgct
201 gatigiciat attaaggaga aaagcttcag agaatatitt aatgactttt 251 icagaaatat gaagcacagt tiatttiggg gtacttaacc catggggtta 301 gttacaatta taaattictt aggagcacic tcgaaagcga acacgacgaa 351 gagccccact aattccagaa attigatgat attigittac gtctigtggt 401 ggtatgatct cgcagtcigt ctagtaatag cgtgggggtat ctcgittcic 451 atctggcatg actattacic tittggaaggg atlgggaatc atccitcata 501 taatatcaaa atggcatccg aaaacatgaa aagigtattg ctactggata 551 icattccgct ggtigtcgic gcttcaagit gtggaacatt cacaatgtca 601 gaaatatict tccatgcgit taatagaaat attcaactga taacgitggi 651 catatgigcc ttaacgtggc tgcatgccat tatcitcgic itcatactga 701 ttgcgatata ctictggagt ctitatatia ataagatacc accaatgaca 751 caggittica ccitattcct gcttttgggc ccgatgggcc aaggaagtiy 801 tggagictia tigctiacag ataatataaa aaaatatgcg ggcaaatatt 851 acccaacaga taacattaca aggaaacaag agatattgac tattgcagtt 901 ccatggtgit tcaaaattct aggcatggit tcigctatgg cattgctcgc 951 tatgggcat tititcaccg tgattcigt cgittcaatc ctgcgtact 1001 acaataaaaa agagattgaa aacggaacag gaaaagtgaa gagagttat 1051 accticcaca aaggtittig ggggatgact ttcccgatag glactatgic 1101 ttaggaaac gaagagttat atgigcagta taaccagtac gitcccttat 1151 atgcaittag ggcctitagaa ccatatacg gcgtgittig cgittgitgg 1201 tcaatictal gcctittatg cacattgcat gagtaticta aaaagatgct 1251 gcatgctgc cgtaaatctt cattattitc agaglcaggt acggaaaaga 1301 cgacagtitc tccgtataac agcattgaaa gcgtggaaga atcaaactcg		151	atcactigcc	ttattttcat	Igcigigcag	gcactacaaa	tattacattt
301 gitacaatia taaatitett aggageacie tegaaagega acaegaegaa 351 gageceeaci aatteeagaa aittgatgat attigitae giettgiggi 401 ggtatgatet egeagietgi etagtaatag egiggggate etegitete 451 atetggeatg actattacie titggaaggg attgggaate ateetteata 501 taatateaaa atggeateeg aaaacatgaa aagigtatig etaetggata 551 teatteegei ggitglegie getteaagii giggaacati cacaatgiea 601 gaaatattei teeatgegit taatagaaat atteaaciga taaegitggi 651 catatgigee ttaaegigge tgeatgeeat tatetteegie tteataetga 701 tigegatata ettetggagi etitatatta ataagataee aceaatgaea 751 caggititea eettatteet gettitggge eegatggee aaggaagtiy 801 tiggagtetta tigettaeag ataatataaa aaaatatigee ggeaaatati 851 aceeaacaga taacattaea aggaaacaag agatattgae tattgeegi 901 eeatggigit teaaaattet aggeatggit teigetatgg eattgeege 951 tatgggetat tittteaeg tgattteigi egitteaale etigegtaet 1001 acaataaaaa agagattgaa aaegagaeag gaaaagigaa gagagittat 1051 acetteeaea aaggittitig ggggatgaet teeegatggeegii teatagie 1101 titaggaaae gaagagitat atgigeagia taaeeagiae giteeettat 1151 atgeattaa geettitatg eacattgeat gagtatteta aaaagatget 1251 geatgeigee egtaaatett eattattite agagteaggi aeggaaaaga 1301 egacagitie teegtataae ageattgaaa geegtggaaga ateaaaeteg		201					
351 gagccccact aattccagaa atttgatgat atttgtttac gtcttgtggt 401 ggtatgatct cgcagtctgt ctagtaatag cgtggggtat ctcgtttctc 451 atctggcatg actattactc tittggaaggg attggggaatc atccttcata 501 taatatcaaa atggcatccg aaaacatgaa aagtgtattg ctactggata 551 tcattccgct ggttgtcgtc gcttcaagtt gtggaacatt cacaatgtca 601 gaaatattct tccatgcgtt taatagaaat attcaactga taacgttggt 651 catatgtgcc ttaacgtggc tgcatgccat tatcttcgtc ttcatactga 701 ttgcgatata cttctggagt ctitatatta ataagatacc accaatgaca 751 caggitttca ccttattcct gcttttgggc ccgatgggcc aaggaagtty 801 tggagtctla ttgcttacag ataatataaa aaaatatgcg ggcaaatatt 851 acccaacaga taacattaca agagaacaag agatattgac tattgcagtt 901 ccatggtgit tcaaaattct aggcatggit tctgctatgg cattgctcgc 951 tatgggctat tttttcaccg tgatttctgt cgtttcaalc ctgtcgtact 1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagttat 1051 accttccaca aaggtttttg ggggatgact ttcccgatgg gtactatgtc 1101 ttaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgtttg cgtttgitgg 1201 tcaattctat gccttttatg cacattgcat gagtaticta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattttc agagtcaggt acggaaaaga 1301 cgacagtttc tccgtataac agcattgaaa gcgtggaaga atcaaactcg		251	tcagaaatat	gaagcacagt	tlattttggg	gtacttatcc	catggggtta
401 ggtatgatct cgcagictgt clagtaatag cgtggggtat ctcgiticte 451 atctggcatg actallacic titggaagg allgggaatc atccitcata 501 taatatcaaa atggcatccg aaaacatgaa aagtgiattg clactggata 551 icaticcgct ggttgtcgtc gcttcaagtt gtggaacatt cacaatgtca 601 gaaatattct tccatgcgtt taatagaaat attcaactga taacgttggt 651 catatgtgcc ttaacgtggc tgcatgccat tatcttcgtc ttcatactga 701 itgcgatata cttctggagt ctitatatta ataagatacc accaatgaca 751 caggititca ccttattcct gcttttgggc ccgatgggcc aaggaagtty 801 iggagtctia ttgcttacag ataatataaa aaaatatgcg ggcaaatatt 851 acccaacaga taacattaca agagaacaag agatattgac tattgcagit 901 ccatggtgit tcaaaattct aggcatggit tctgctatgg cattgctcgc 951 tatgggctat tttttcaccg tgatttctgt cgittcaalc ctgtcgtact 1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagttat 1051 accttccaca aaggtttttg ggggatgact ttcccgatgg gtactatgtc 1101 ttaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgittg cgtttgitgg 1201 icaattctat gccttttatg cacattgcat gagtaticta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattitc agagtcaggt acggaaaaga 1301 cgacagitic tccgtataac agcattgaaa gcgtggaaga atcaaactcg		301	gtiacaatia	taaattictt	aggagcactc	tcgaaagcga	acacgacgaa
451 atciggcatg actailacic litiggaaggg aligggaatc atccitcata 501 taatatcaaa alggcatccg aaaacatgaa aagigtattg ctactggata 551 tcattccgci ggtigtcgic gcttcaagit giggaacatl cacaatgica 601 gaaatattci tccatgcgit taatagaaat attcaactga taacgitggi 651 catatgigcc ttaacgiggc tgcatgccat tatcitcgic itcatactga 701 tigcgatata citciggagi cittatatta ataagatacc accaatgaca 751 caggititca ccttattcct gcttitgggc ccgatgggcc aaggaagtiy 801 tiggagictia tigcitacag ataatataaa aaaatatgcg ggcaaatatt 851 acccaacaga taacattaca agagaacaag agatattgac tattgcagit 901 ccatggigit tcaaaattct aggcatggit tcigciatgg cattgctcgc 951 tatgggctat titttcaccg tgattictgi cgittcaalc cigtcgtact 1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagttat 1051 accttccaca aaggttittg ggggatgact ttcccgatgg glaciatgic 1101 titaggaaac gaagagtat atgigcagia taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgittg cgttigtigg 1201 tcaatictat gccttitatg cacattgcat gagtaticta aaaagatgct 1251 gcatgcigcc cgtaaatctt cattattitc agagtcaggi acggaaaaga 1301 cgacagitic tccgtataac agcattgaaa gcgtggaaga atcaaactcg		351	gagccccact	aattccagaa	attigatgat	attigittac	gtcttgtggt
taatatcaaa alggcatccg aaaacatgaa aagtgtattg ctactggata tcattccgct ggttgtcgtc gcttcaagtt gtggaacatt cacaatgtca gaaatattct tccatgcgtt taatagaaat attcaactga taacgttggt catatgtgcc ttaacgtggc tgcatgccat tatcttcgtc ttcatactga ttgcgatata cttctggagt ctitatatta ataagatacc accaatgaca rot ttgcgatata cttctggagt ctitatatta ataagatacc accaatgaca rot caggittica ccttattcct gcttttgggc ccgatgggcc aaggaagtty got ttggagtcta ttgcttacag ataatataaa aaaatatgcg ggcaaatatt accaacaga taacattaca agagaacaag agatattgac tattgcagtt got ccatggtgtt tcaaaattct aggcatggtt tcigctatgg cattgctcgc got tatgggctat tttttcaccg tgatttctgt cgtttcaatc ctgtcgtact accaacaaa agagattgaa aacgagacag gaaaagtgaa gagagttat accttccaca aaggtttttg ggggatgact ttcccgatgg gtactatgtc tttaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat atgcatttag agtcctagga accatatacg gcggtgtttg cgtttgitgg tcaattctat gccttttatg cacattgcat gagtaticta aaaagatgct gcatgctgcc cgtaaatctt cattattitc agagtcaggt acggaaaaga accaacttgcat gcgtggaaga atcaaactcg		401	ggtatgatct	cgcagtctgt	ctagtaatag	cgtggggtat	ctcgtttctc
551 icaticcgci ggitgicgic gcitcaagit giggaacati cacaatgica 601 gaaatatici tecatgcgit taatagaaat aticaactga taacgitggi 651 catatgigcc ttaacgiggc tgcatgccat tatettegic ttcatactga 701 itgcgatata citciggagi cittatatta ataagatace accaatgaca 751 caggittica ccitattect gcittiggge ccgatgggec aaggaagity 801 iggagictia tigcitacag ataatataaa aaaatatgcg ggcaaatatt 851 acceaacaga taacattaca agagaacaag agatattgac tattgcagit 901 ccatggigit tcaaaattet aggcatggit teigciatgg cattgctege 951 tatgggetat titttcaccg tgattictgi cgittcaale etgtegtact 1001 acaataaaaa agagattgaa aacgagacag gaaaagigaa gagagittat 1051 accitccaca aaggittitig ggggatgact ticccgatgg glaciatgic 1101 titaggaac gaagagitat atgigcagia taaccagtac gitcccttat 1151 atgcattag agicctagga accatatacg gcggigitig cgitigitgg 1201 icaatictat gcctittatg cacattgcat gagitaticta aaaagatgct 1251 gcatgcigce cgtaaatcit cattatitic agagicaggi acggaaaaga 1301 cgacagitic tecgtataac agcattgaaa gcgtggaaga atcaaactcg	i	451	atciggcaig	actattactc	tttggaaggg	allgggaatc	atccttcata
601 gaaatatict tecatgegtt taatagaaat atteaactga taacgitggt 651 catatgigee ttaacgigge tgeatgeeat tatettegte tteatactga 701 ttgegatata citetggagt cittatatta ataagatace accaatgaca 751 caggititea cettatteet gettitggge cegatgggee aaggaagtty 801 tggagtetta ttgettacag ataatataaa aaaatatgee ggeaaatatt 851 acceaacaga taacattaca agagaacaag agatattgae tattgeagtt 901 ceatggigtt teaaaatteet aggeatggit tetgetatge cattgetege 951 tatgggetat tittteaceg tgattleigt egitteaale etgeteget 1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagttat 1051 acciteeaca aaggittitig ggggatgaet teecgatgg glaciatgie 1101 titaggaaae gaagagtat atgigeagta taaceagtae giteeettat 1151 atgeattag agteetagga accatataee geggigtitig egittgitgg 1201 teaattetat geettitatg cacattgeat gagtatieta aaaagatget 1251 geatgetgee egtaaatett cattattite agagteagga atcaaacteg		501	taatatcaaa	atggcatccg	aaaacatgaa	aagtgtattg	ctactggata
651 catatgigce transgigge tgeatgear tatetregie treatactga 701 transgigge transgigge transgigge transgigge and transgigge and transgigge transgigge catagrae 751 caggitite certaitect gettrigge cegatggee angangtry 801 transgiggeria transgiggeria and transgiggeria and transgiggeria transgiggeria and transgiggeria transgiggeria transgiggeria transgiggeria transgiggeria angangara and transgiggeria transgiggeria angangara angangara gangara angangara angangara angangara gangara angangara a							
tigggatata citciggagi cittatatta ataagatacc accaatgaca caggittica ccitalicci gctitigggc ccgatgggcc aaggaagtty got iggagicita tigcitacag ataatataaa aaaatatgcg ggcaaatatt got ccaacaga taacattaca agagaacaag agatattgac tattgcagit got ccatggigit tcaaaattci aggcatggit tcigciatgg cattgcicgc got tatgggciat titticaccg tgatticigi cgittcaatc cigicgtact lool acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagittat accitccaca aaggittitig ggggatgaci ticccgatagic tittaggaaac gaagagitat atgigcagia taaccagiac gitcccttat titagaaac gaagagitat atgigcagia taaccagiac gitcccttat atgitatagicattiag agicctagga accatatacg gcggigitig cgitigitig tcaaticiat gcctitiatg cacattgcat gagitaticta aaaagatgci gcatgcigcc cgtaaatcit cattatitic agagicaggi acggaaaaga tagaactic tccgtataac agcattgaaa gcgtggaaga atcaaactcg			gaaatattet	tccatgcgtt	taatagaaat	attcaactga	taacgitggt
751 caggititca ccitalicci gcititggc ccgatggcc aaggaagity 801 iggagicita tigciiacag ataatataaa aaaatatgcg ggcaaatatt 851 acccaacaga taacattaca agagaacaag agatattgac tattgcagit 901 ccatggigit tcaaaattci aggcatggit tcigciatgg cattgctcgc 951 tatgggciat titticaccg tgatticigi cgiticaatc cigicgtact 1001 acaataaaaa agagattgaa aacgagacag gaaaagigaa gagagittat 1051 accitccaca aaggititig ggggatgaci ticccgatgg gtactatgic 1101 titaggaaac gaagagitat atgigcagia taaccagiac gitcccttat 1151 atgcattag agicctagga accatatacg gcggigitig cgitigitgg 1201 tcaaticial gcctitiatg cacattgcat gagitaticta aaaagatgci 1251 gcatgcigcc cgtaaatcii cattattiic agagicaggi acggaaaaga 1301 cgacagitic tccgtataac agcattgaaa gcgtggaaga atcaaactcg			catatgtgcc	ttaacgtggc	tgcatgccat	tatcttcgtc	ttcatactga
801 iggagicita tigcilacag alaatataaa aaaatatgcg ggcaaatatt 851 acccaacaga taacattaca agagaacaag agatattgac tattgcagit 901 ccatggigit tcaaaattct aggcatggit tcigciatgg cattgctcgc 951 latgggciat titticaccg igatticigi cgiticaalc cigicgtact 1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagittat 1051 accitccaca aaggittitig ggggatgact ticccgatgg gtactatgic 1101 titaggaaac gaagagitat atgigcagia taaccagiac gitcccttat 1151 atgcatttag agicctagga accatatacg gcggigitig cgitigitig 1201 icaaticial gcctitiatg cacattgcat gagitaticta aaaagatgct 1251 gcatgcigcc cgtaaatctt cattattiic agagicaggi acggaaaaga 1301 cgacagitic tccgtataac agcattgaaa gcgtggaaga atcaaactcg							
851 acccaacaga taacattaca agagaacaag agatattgac tattgcagtt 901 ccatggtgit tcaaaattct aggcatggit tcigctatgg cattgctcgc 951 tatgggctat titttcaccg tgattictgt cgittcaatc ctgtcgtact 1001 accataaaaa agagattgaa aacgagacag gaaaagtgaa gagagtttat 1051 accttccaca aaggttittg ggggatgact ttcccgatgg gtactatgtc 1101 tittaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgittg cgtttgttgg 1201 tcaattctat gccttitatg cacattgcat gagtaticta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattitc agagtcaggi acggaaaaga 1301 cgacagttic tccgtataac agcattgaaa gcgtggaaga atcaaactcg							
901 ccatggtgit tcaaaattct aggcatggit tcigctatgg cattgctcgc 951 tatgggctat ttittcaccg tgatttctgt cglitcaatc ctgtcgtact 1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagtttat 1051 accitccaca aaggttittg ggggatgact ttcccgatgg glactatgtc 1101 tttaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgittg cgtttgttgg 1201 tcaattctat gcctittatg cacattgcat gagtaticta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattitc agagtcaggi acggaaaaga 1301 cgacagttic tccgtataac agcattgaaa gcgtggaaga atcaaactcg	1						
951 tatgggctat titttcaccg tgatttctgt cgittcaatc cigtcgtact 1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagttat 1051 accttccaca aaggtttttg ggggatgact ttcccgatgg glactatgtc 1101 titaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgtttg cgtttgttgg 1201 tcaattctat gccttttatg cacattgcat gagtattcta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattttc agagtcaggt acggaaaaga 1301 cgacagtttc tccgtataac agcattgaaa gcgtggaaga atcaaactcg							
1001 acaataaaaa agagattgaa aacgagacag gaaaagtgaa gagagtttat 1051 accttccaca aaggtttttg ggggatgact ttcccgatgg glaciatgtc 1101 tttaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgtttg cgtttgttgg 1201 tcaattctat gccttttatg cacattgcat gagtattcta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattttc agagtcaggt acggaaaaga 1301 cgacagttic tccgtataac agcattgaaa gcgtggaaga atcaaactcg							
1051 accttccaca aaggtttttg ggggatgact ttcccgatgg glactatgtc 1101 tttaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgtttg cgtttgttgg 1201 tcaattctat gccttttatg cacattgcat gagtattcta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattttc agagtcaggt acggaaaaga 1301 cgacagtttc tccgtataac agcattgaaa gcgtggaaga atcaaactcg		-	tatgggctat	tttttcaccg	igatticigi	cgittcaatc	cigicgiaci
1101 titaggaaac gaagagttat atgtgcagta taaccagtac gttcccttat 1151 atgcatttag agtcctagga accatatacg gcggtgtttg cgtttgttgg 1201 tcaattctal gccttttatg cacattgcat gagtattcta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattttc agagtcaggt acggaaaaga 1301 cgacagttic tccgtataac agcattgaaa gcgtggaaga atcaaactcg							
1151 atgcatttag agtcctagga accatatacg gcggtgtttg cgtttgttgg 1201 tcaattctat gccttttatg cacattgcat gagtaticta aaaagatgct 1251 gcatgctgcc cgtaaatctt cattattttc agagtcaggt acggaaaaga 1301 cgacagtttc tccgtataac agcattgaaa gcgtggaaga atcaaactcg							
1201 icaalicial geetiliatg cacaligeat gaglaticia aaaagatget 1251 geatgeigee egtaaatett cattatilie agagleaggi aeggaaaaga 1301 egacagitie teegtalaac agealigaaa gegiggaaga alcaaacteg							
1251 gcatgctgcc cgtaaatctt cattattitc agagtcaggi acggaaaaga 1301 cgacagttic tccgtataac agcattgaaa gcgtggaaga atcaaactcg							
1301 cgacagitic iccgtataac agcattgaaa gcgtggaaga atcaaactcg							
1351 getetagatt itaegegitt ageataa						gcgtggaaga	atcaaactcg
	-	1351	gctctagatt	ttacgcglit	agcataa		

nonScS	SU1				
	l atggtcgcta	gttggatgct	cacigccaca	agggatitca	accetticat
5	0 0 1 1 1 0	gitaiggggg			
10		ggcgaggtgg	ctgaggatat	gctcgtacat	catgittgcc
15	l attacatgit	tgattttcat	ctctgtacag	gcgctgcagc	ttttgcacat
20	l ggicalctal	atcaaagaaa	aaagctttag	agattacttc	aatgaatatt
25		gaaglacaal	ttattttggg	gtactiatcc	catgggatta
30	•	taaattttt			
35	1 aagccctgcg	aatgccaagc	actigateat	ttitgittac	glcclgtggt
40		cgcggtttgt	ttagtaaccg	ctigggggat	ttcattcctc
45	l atciggcaaa	agtaclactt	cgtggacggg	gtiggaaatc	actetteata
50		atggcttccg	accacatgaa	aagcgtactg	tigciagata
55	l tcattccgct	ggtcgttgtc	gcttcgagcg	gtgggacatt	tacaatgica
60	l aaaatattcg	gtaccacttt	tgataggaat	attcaattgc	taacactggt
65	l catcigigce	ctggtttggc	tacacgctct	tatattigic	tttattctga
70	l ttacaatata	cttctggaat	ctttacatca	ataagatacc	accaatgacg
75	l caggialita	cgitgttctt	ggtattgggg	ccattgggcc	aaggaagtit
80	l iggiailiig	tigctiacig	acaatalaag	aaagtalgta	gaaaaatact
85	l acccaaggga	aaacatcacc	atggaacaag	aaatactaac	cattatggtt
90	l ccgtggtgtt	tcaaggiict	gggcatgaca	tttgctttgg	cattaatcgc
95	l tatgggttac	tictttacgg	taatttccct	tatttcgatt	ttatcatact
100	i acaatgaaag	agtigitgac	aatgaaacag	gcaaagigaa	aaggatctac
105	l actiticcata	aaggiticig	ggggatgact	ttcccgatgg	gtaccatgic
110	l itigggaaac	gaggagctgt	atctgcaata	caaccagtat	gttcccttat
115	l atgcaticag	agtcatagct	accatatatg	gtggtalttg	tgttlgctgg
120	l tcaatcttat	gcctctcgtg	cacgitgiai	ggttacctga	aaacgattct
125	l ccatgctgcc	cgtaaacctt	cgtttttatc	agaggaaggg	acggagaaga
130	l ctgtcaattc	tcctttcaac	agcatcgaaa	gtgtggagga	atcaaactcg
135	l gclatcgata	gtacatattt	aacataa		

TITLE: SCREENING METHOD FOR GENES OF

BREWING YEAST

INVENTOR(S): YOSHIHIRO NAKAO ET AL. ATTORNEY DKT. NO.: 034100-002 **SHEET 11 of 12**

Fig. 11

ScMET14					
1	atggctacta	atattacttg	gcatccaaat	cttacttacg	acgaacgcaa
51	ggcattgaga	aaacaggacg	gttgtactat	tiggitaaca	ggtctaagtg
101	cgtcaggtaa	aagtacaatc	gcctgtgcgc	tagaacagtt	actgctccaa
151	aaaaacttgt	ctgcatatag	attggatggt	gacaacattc	gttttggatt
201	gaacaaggat	ttgggtttct	cagaaaagga	cagaaatgaa	aacattcgta
251	gaattagcga	agtitctaag	ctatttgctg	attcatgtgc	tatttcaatc
301	acctcattta	tctctccata	cagagitgac	agagatagag	ctcgtgaact
351	acataaggag	gctggtttga	agttcattga	aatatttgtt	gatgttccat
401	tagaagtcgc	tgagcaaagg	gaccctaagg	gtttatacaa	gaaagctagg
451	gagggtgtaa	tcaaggagtt	tacaggtatt	tctgccccat	atgaagcgcc
501	aaaagctcca	gagctacatt	tgagaaccga	ccagaagacg	gttgaagaat
551	gtgctaccat	tatttatgag	tacttaatca	gtgaaaaaat	catccgtaag
601	catttgtaa				

nScME1					
1	atggctacta	atatcacttg	gcatccaaat	cttacctacg	acgaacgtaa
51	ggaattaaga	aagcaagacg	gctgtaccgt	ttggttgacc	ggtctaagtg
101	cgtcaggaaa	aagtacaata	gcttgtgcac	tggaacaatt	actgcttcaa
151	aaaaacttat	ctgcttatag	gttagatggt	gataacattc	gttttggttt
201	gaataaggat	ttgggcttct	cagaaaagga	cagaaatgaa	aacattcgta
251	gaattagtga	agtatccaag	ctattcgctg	attcgtgtgc	tgtatccatc
301	acticatita	tttccccata	cagagicgai	agagacagag	cccgtgattt
351	acataaggaa	gcaggcttga	agttcattga	aatttttgtt	gatgttccat
401	tagaagtcgc	tgagcaaaga	gaccctaagg	gtttgtataa	gaaagccaga
451	gaaggtgtga	ttaaagagtt	cactggtatt	tcagctcctt	acgaagctcc
50 1	aaaggcccca	gagttgcatt	taagaactga	ccaaaagact	gttgaagaat
551	gtgctgctat	catttatgag	tacciggica	atgagaagat	tatccggaag
601	catctataa				

TITLE: SCREENING ETHOD FOR GENES OF

BREWING YEAST

INVENTOR(S): YOSHIL RO NAKAO ET AL.

ATTORNEY DKT. No.: 034100-002

SHEET 12 of 12

Fig. 12

